

Amendments to the Drawings:

The attached replacement sheet 1/3 replaces sheet 1/3 of the original drawings in the application. New Fig. 6 has been added to replacement sheet 1/3. No new matter has been added.

Attachment: Replacement Sheet 1/3

REMARKS/ARGUMENTS

The Office Action dated April 6, 2007 has been carefully considered. Claims 11-40 are pending in the application, with claims 11 and 21 being the only independent claims. Claims 11, 13, 14, 21 and 30-32 have been amended. Reconsideration of the application, as amended herein and in view of the following remarks, is respectfully requested.

Objection to the Drawings

The drawings stand objected to because they do not show the polygonal elevating roll of claims 15, 18, 24 and 27. Fig. 6, which shows each of the elevating rolls has a polygonally shaped cross-section, has been added to the drawings. In view of this addition, the objection to the drawings is respectfully requested.

Rejection under 35 U.S.C. 112

Claims 11-15, 17, 18, 20-24, 26, 27 and 29-40 stand rejected under 35 U.S.C. 112, second paragraph, because of the wording "sufficient" in claims 11 and 21.

The wording "sufficient" has been deleted from claims 11 and 21. In view of this deletion, withdrawal of the rejection of claims 11-15, 17, 18, 20-24, 26, 27 and 29-40 under 35 U.S.C. 112, second paragraph, is deemed in order.

Rejection of the Claims Over the Prior Art

Claims 21-24, 26, 27, 29 and 33-36 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,743,375 (*Shyr*).

Claims 11-15, 17, 18 and 20 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Shyr* in view of U.S. Patent No. 5,655,425 (*Ruohio*).

Claims 30-32 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Shyr* in view of U.S. Patent No. 5,060,780 (*Santandrea*).

Claims 37 and 38 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Shyr*.

Claims 39 and 40 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Shyr* in view of *Santandrea*.

Allowability of Claim 21

Applicant has amended independent claim 21 to more clearly distinguish it over the prior art of record. Support for this amendment can be found, for example, in Figs. 2 and 3.

Amended claim 21 now recites the following:

“a conveyor belt or chain running about driving and tail pulleys, the conveyor belt or chain being configured to support a roll set on a top surface of the conveyor belt or chain at a base level in a first section of a transport path between the driving and tail pulleys;

an elevating roll assembly positioned at a second section of the transport path between the driving and tail pulleys below a portion of the top surface of the conveyor belt or chain and operable to form on the top surface of the conveyor belt or chain an elevation above the base level to separate the rolls of the roll set from each other when the rolls of the roll set are transported by the conveyor belt or chain over the elevation” (emphasis added).

Applicant respectfully submits that amended claim 21 is not anticipated by *Shyr* because *Shyr* fails to teach or suggest the above-quoted limitations of amended claim 21. In particular, *Shyr* fails to disclose, teach or suggest an elevating roll assembly which is positioned below a portion of the top surface of a conveyor belt or chain and operable to form on the top surface of the conveyor belt or chain an elevation above a base level of the top surface.

Shyr relates to a conveyer transfer apparatus for use in a main roller conveyer 1 for lifting an article upwardly and moving it laterally to a secondary roller conveyer 2 (see Fig. 1, Abstract and col. 2, lines 17-24 of *Shyr*). As clearly shown in Figs. 1 and 5 of *Shyr*, the main roller conveyer 1 has a plurality of rollers 11, the longitudinal axes of which are parallel to each other and are perpendicular to the moving direction of the main roller conveyer 1. The secondary roller conveyer 2 similarly has a plurality of rollers, the longitudinal axes of which are parallel to

each other and to the moving direction of the main roller conveyer 1.

The conveyer transfer apparatus of *Shyr* includes a pair of side-roller chain assemblies. Each side-roller assembly is disposed between two adjacent rollers 11 of the main roller conveyer 1, and includes a pair of eccentric sprockets 34 and 35, 36 and 37 which have the same eccentric phase, and a side-roller chain 71, 72 which is would around and driven by the pair of eccentric sprockets 34 and 35, 36 and 37. Attached to both ends of alternate pitches of each side-roller chain 71, 72 are chain rollers 74, 76. The side-roller chain 71 will move synchronously with the side-roller chain 72. Thus, when the pair of eccentric sprockets 34 and 35, 36 and 37 rotate, side-roller chain 71 or 72 will be alternately rotated, thus the top surface of the side-roller chain 71 or 72 will be moved alternately from below to above the top surface of the rollers 11 of the main roller conveyer 1 to create a lifting function. An object may then be rolled on the chain rollers 74, 76 on the side roller chains 71, 72. See Figs. 1-8 and 10, col. 1, lines 46-55, and col. 2, line 55 to col. 3, line 4 of *Shyr*.

By definition, neither the main roller conveyer 1 nor the secondary roller conveyer 2 has a conveyor belt or chain, as expressly recited in claim 21 of the present application. Nor do they have driving and tail pulleys, as expressly recited in claim 21.

On pages 3 and 4 of the Office Action, the Examine states that the eccentric sprockets of *Shyr* are considered to be the driving and tail pulleys and the respective side-roller chain 71, 72 are a conveyor belt or chain. However, as discussed above and as clearly shown in Figs. 7 and 8 of *Shyr*, since the chain rollers 74, 76 are fixedly attached to the alternate pitches of the side-roller chain 71, 72, the position of such chain rollers 74, 76 is fixed with respect to the side-roller chain 71, 72. Furthermore, as clearly shown in Figs. 7 and 8 of *Shyr*, each chain roller 74, 76 is disposed laterally to the respective side-roller chain 71, 72 with its top surface thereof being

disposed above the top surface of the respective side-roller chain 71, 72. Hence, in *Shyr* the article to be lifted and transported is not supported by each side-roller chain 71, 72. Rather, the article is supported by the chain rollers 74, 76. Therefore, *Shyr* fails to disclose, teach or suggest the limitation “a conveyor belt or chain running about driving and tail pulleys, the conveyor belt or chain being configured to support a roll set on a top surface of the conveyor belt or chain at a base level...” (emphasis added) of amended claim 21 of the present application.

Moreover, since in *Shyr* the position of the chain rollers 74, 76 is fixed with respect to the side-roller chain 71, 72 with the top surfaces thereof being disposed above the top surface of the respective side-roller chain 71, 72 and forming a single base level. The chain rollers 74, 76 of *Shyr* do not qualify as an elevating roller assembly that is positioned below a portion of the top surface of a conveyor belt or chain and operable to form on the top surface of the conveyor belt or chain an elevation above the base level. Therefore, *Shyr* fails to disclose, teach or suggest the limitations “an elevating roll assembly positioned...below a portion of the top surface of the conveyor belt or chain and operable to form on the top surface of the conveyor belt or chain an elevation above the base level to separate the rolls of the roll set from each other when the rolls of the roll set are transported by the conveyor belt or chain over the elevation” (emphasis added) of amended claim 21.

In view of these differences, withdrawal of the 35 U.S.C. 102(b) rejection of claim 21 is respectfully requested.

Allowability of Claim 11

Applicant has also amended independent claim 11 to specify that the elevation is formed “between the driving and tail pulleys” and “above the base level”.

On pages 5 and 6, the Examiner contends that with the exception of rolls in a roll set, *Shyr* discloses all of the recited limitations of claim 11. However, as discussed above in connection with claim 21, in *Shyr* neither the main roller conveyer 1 nor the secondary roller conveyer 2 has a conveyor belt or chain. Additionally, in *Shyr* the article to be lifted and transported is supported by the chain rollers 74, 76, not by the side-roller chain 71, 72 because the position of the chain rollers 74, 76 is fixed with respect to the side-roller chain 71, 72 with the top surfaces of the chain rollers 74, 76 being disposed above the top surface of the respective side-roller chain 71, 72 and forming a single base level. Therefore, *Shyr* fails to disclose, teach or suggest the limitations “transporting the roll set on a top surface of said conveyor belt or chain at a base level” and “forming onto the top surface of the conveyor belt or chain...an elevation above the base level” of claim 11 of the present application.

Ruohio does not supply what is missing from *Shyr*. The Examiner just cites *Ruohio* as disclosing transporting rolls in a roll set.

In view of the foregoing, withdrawal of the 35 U.S.C. 103(a) rejection of claim 11 is respectfully requested.

Allowability of Claims 12-15, 17, 18, 20, 22-24, 26, 27 and 29-40

Dependent claims 12-15, 17, 18 and 20 are allowable for at least the same reasons that independent claim 11 is allowable, as well as for the additional limitations recited therein.

Similarly, dependent claims 22-24, 26, 27 and 29-40 are allowable for at least the same reasons that independent claim 21 is allowable, as well as for the additional limitations recited therein.

Rejoinder of Claims 16, 19, 25 and 28


Claim 11 is generic to claims 16 and 19 and claim 21 is generic to claims 25 and 28. Therefore, upon allowance of claims 11 and 21, consideration of claims 16, 19, 25 and 28 is respectfully requested.

Conclusion

In view of all of the above, the application is now deemed to be in condition for allowance and notice to that effect is respectfully solicited.

Respectfully submitted,

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